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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/381,344	09/20/1999	GERHARD SEEMANN	2481.1640	3847

7590 09/19/2005

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EXAMINER	
LIETO, LOUIS D	

ART UNIT	PAPER NUMBER
1632	

DATE MAILED: 09/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action Before the Filing of an Appeal Brief	Application No. 09/381,344	Applicant(s) SEEMANN ET AL.	
	Examiner Louis D. Lieto	Art Unit 1632	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 05 July 2005 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
   a) ☐ The period for reply expires _____ months from the mailing date of the final rejection.
   b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☒ The Notice of Appeal was filed on *05 July 2005*. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   (a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);
   (b) ☐ They raise the issue of new matter (see NOTE below);
   (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: *See Continuation Sheet*. (See 37 CFR 1.116 and 41.33(a)).
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: *None*.
   Claim(s) objected to: *None*.
   Claim(s) rejected: *5-18 and 23-32*.
   Claim(s) withdrawn from consideration: *19-22*.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☐ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). _____
13. ☒ Other: See Continuation Sheet.

Deborah Crouch

DEBORAH CROUCH
PRIMARY EXAMINER
GROUP 1800/1630

HC

Continuation of 3. NOTE: The proposed amendments raise new issues under Double Patenting that would require further consideration. For example, the amendment to claim 26 causes it to claim substantially the same scope of subject matter as claim 29 .

Continuation of 13. Other: Claim Rejections - 35 USC § 102(a)

The rejection of original or amended claims 26 and 27 under 35 U.S.C 102(a) as being anticipated as being anticipated by Smith et al (Gene Therapy 3:496-502, 1996; abstract only), is maintained for reasons of record stated in the office actions of 3/31/2005, 7/30/03, 6/24/02, and 10/11/2001. Applicant's amendment filed on 7/05/2005 have been fully considered and would have been sufficient to overcome this rejection if the proposed amendment did not raise new issues.

The rejection of original or amended claims 26 and 27 under 35 U.S.C 102(a) as being anticipated as being anticipated by Trapnell et al (WO 96/12406, 05-02-1996), is maintained for reasons of record stated in the office actions of 3/31/2005, 7/30/03, 6/24/02, and 10/11/2001. Applicant's amendment filed on 7/05/2005 have been fully considered and would have been sufficient to overcome this rejection if the proposed amendment did not raise new issues.

Claim Rejections - Double Patenting

The rejection of Claim 25 for being a substantial duplicate of claim 28 is maintained for reasons of record stated in the office actions of 3/31/2005. Applicant's amendment filed on 7/05/2005 have been fully considered and would have been sufficient to overcome this rejection if the proposed amendment did not raise new issues.

Claim Rejections - 35 USC § 112 (2)

The rejection of claim 16 is withdrawn in view of applicant's arguments

Claim Rejections - 35 USC § 112 (1)

The rejection of original or amended claims 5-18 and 23-32 under 35 U.S.C 112, first paragraph for lack of enablement is maintained for reasons of record stated in the office actions of 3/03/2005, 7/30/03, 6/24/02, and 10/11/2001. Applicant's arguments filed on 7/05/2005 have been fully considered but they are not persuasive in fully overcoming the previously stated issues of rejection.

The prior off ice action of 3/31/2005 identified the following outstanding issues of record: 1) lack of enablement for administration of, or increasing the tolerance of, transgenic cells in any mammal including a man wherein the transgenic cells were from the same or different species expressed any gene or where the method was for treating any disease by gene therapy or by ex vivo cell therapy; 2) lack of enabling disclosure for how a transgenic cells would be prepared in vitro or how a transgenic cell would be administered to a mammal or what doses of the cell would be used; 4) lack of enabling disclosure as to how the methods of treatment of diabetes or AIDS, or DNA vaccination would be carried out, or what doses of the DSG would be used or what routes of administration would be used or which transgene would be used such that the effect of the transgene induced immune response is decreased by DSG treatment; 5) lack of enablement for the claimed method when transgenic cells are transplanted in a mammal or in a man, except for autologous cell transplantation which would produce minimal immune response; and 6) lack of enablement for a method of gene therapy.

Applicant's arguments were found to be persuasive in overcoming the grounds of rejection based on issues 1,2, and 5. Issues 4 and 6 remain outstanding and will be treated together.

Applicant argues that the specification provides adequate guidance to enable the full scope of the claims for the treatment of any heritable disease, such as diabetes or AIDS. Further, applicant argues that applicants are not required to submit information that can be determined by routine experimentation. Finally, applicant argues that a gene therapy treatment does not require a patient to be cured, as long as they can demonstrate at least a low expression of a therapeutically useful gene. However, in order for the specification to enable the claimed invention it must provide guidance to the ordinary practitioner in the art on how to predictably generate sufficient levels gene expression in order to produce a therapeutic effect. The specification is insufficient in this regard. As stated previously: , applicant's claims read on the administration of any transgene as part of a method of gene therapy and their working examples are limited to the expression of β-Galactosidase and AAT in mice. For the reasons stated in the prior office action and reiterated below showing that these two genes can be expressed in mice does not enable a method of gene therapy for any transgene in any mammal for treating a disease. Second, the specification does not provide any evidence that the expression of a transgene, such as AAT, can be used to treat any disease in any mammal, even mice. The term treatment requires that their be some positive benefit to a mammal that is afflicted with a relevant disease. Neither the specification nor the applicant's arguments provide any evidence that expressing increased levels of AAT in a mouse provides a positive benefit to any mice afflicted with any disease. Third, methods of gene therapy remain unpredictable in the art. While many gene therapy protocols may be widely available there are substantial problems with reproducing results in different species using different vectors and/or transgenes and a method developed to treat one condition may not be applied to treat another disease. Further, examples 1 and 2 do not provide any guidance on the treatment of any disease in regards to the time frame of DSG administration, the amounts of DSG to be administered and whether the timing or dosage of DSG must be varied to account for differences in the transgene to administered, the vector comprising the transgene, the gene therapy target or the route of transgene administration. None of these questions can be predictably addressed based on the working examples disclosed in the specification and the lack of specific guidance in the specification. Case law teaches (Ex parte Forman, 230 USPQ 546,547 (BPAI 1986)) that "the disclosure of a patent application must enable practice of the invention claimed without undue experimentation", wherein factors involved in the determination of undue experimentation were deemed to include "the quantity of experimentation necessary, the amount of direction or guidance presented, the presence or absence of working examples, the nature of the invention, the state of the prior art, the relative skill of those in that art, the predictability or unpredictability of the art and the breadth of the claims." Further, "case law requires that the disclosure of an application shall inform those skilled in the art how to use applicant's alleged discovery, not to find out how to use it for themselves." In re Gardner 166 USPQ 138 (CCPA) 1970 .